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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/795,804

03/08/2004

Nena Dockery

AWS-101

7713

7590

02/22/2006

Janine A. Moderson  
Pauley Petersen & Erickson  
Suite 365  
2800 West Higgins Road  
Hoffman Estates, IL 60195

EXAMINER

DAVIS, RUTH A

ART UNIT

PAPER NUMBER

1651

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/795,804	<b>Applicant(s)</b> DOCKERY ET AL.	
	<b>Examiner</b> Ruth A. Davis	<b>Art Unit</b> 1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (US 4032633).

Applicant claims a supplement comprising chlorella and an enzyme blend comprising lysing and microbial enzymes, wherein the enzymes improve digestibility of the chlorella. The lysing enzymes are effective to lyse fibrous components of the chlorella; the microbial enzymes are effective to improve digestion of carbohydrate and protein parts of the chlorella.

Kobayashi teaches foodstuff, nutritional compositions comprising chlorella and an enzyme blend of cellulose, beta gluconase, protease, hemicellulase, and amylase (including glucoamylase) (lysing and microbial enzymes) (claims). Kobayashi teaches that the enzymes are effective to digest the walls of the chlorella and improve digestibility of the chlorella in food stuffs (col.1 line 15-30).

The reference anticipates the claimed subject matter.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 – 3, 6 – 12 and 15 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayahsi.

Applicant claims a supplement comprising chlorella and an enzyme blend comprising lysing and microbial enzymes, wherein the enzymes improve digestibility of the chlorella. The composition comprises 85 – 90% chlorella; 10 – 15% enzyme blend; the enzyme blend comprises 2 – 5% lysing enzymes; or 95 – 98% microbial enzymes. Applicant claims a supplement comprising about 88% chlorella 12% enzyme blend of lysing and microbial enzymes, wherein the enzymes improve digestibility of the chlorella. The lysing enzymes are effective to lyse fibrous components of the chlorella; the microbial enzymes are effective to

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improve digestion of carbohydrate and protein parts of the chlorella. The enzyme blend comprises about 3.5% lysing enzymes, or about 96.5% microbial enzymes.

Kobayashi teaches foodstuff, nutritional compositions comprising chlorella and an enzyme blend of cellulose, beta gluconase, protease, hemicellulase, and amylase (lysing and microbial enzymes) (claims). Kobayashi teaches that the enzymes are effective to digest the walls of the chlorella and improve digestibility of the chlorella in food stuffs (col.1 line 15-30).

Kobayashi does not teach the compositions comprising the claimed amounts of enzymes and chlorella. However, Kobayashi identifies the lysing and microbial enzymes as effective to lyse the cell walls of the chlorella, and are thus recognized result effect variables. At the time of the claimed invention, one of ordinary skill in the art would have been motivated by Kobayashi to optimize the amounts of enzymes, as a matter of routine experimentation. Moreover, at the time of the claimed invention, one of ordinary skill in the art would have been motivated to optimize the amounts of enzymes with a reasonable expectation for successfully obtaining the effective nutritional composition of Kobayashi.

6. Claims 1 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayahsi in view of Sabin (US 5217959 A), Rohde, jr. et al. (US 6132727 A) and Perkes (US 200200048575 A1)

Applicant claims a supplement comprising chlorella and an enzyme blend comprising lysing and microbial enzymes, wherein the enzymes improve digestibility of the chlorella. The lysing enzymes are effective to lyse fibrous components of the chlorella; the microbial enzymes are effective to improve digestion of carbohydrate and protein parts of the chlorella. The lysing

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enzymes are hemicellulase, beta-gluconase and phytase; the microbial enzymes are bromelain, protease 4.5, protease 3.0, lipase AN, peptidase, pectinase, amylase, cellulase and glucoamylase. The composition comprises 85 – 90% chlorella ; 10 – 15% enzyme blend ; the enzyme blend comprises 2 – 5% lysing enzymes; or the enzyme blend comprises 95 – 98% microbial enzymes. Applicant claims a supplement comprising about 88% chlorella 12% enzyme blend of lysing and microbial enzymes; wherein the enzymes improve digestibility of the chlorella wherein the lysing enzymes are effective to lyse fibrous components of the chlorella; the microbial enzymes are effective to improve digestion of carbohydrate and protein parts of the chlorella; the lysing enzymes are hemicellulase, beta-gluconase and phytase; the microbial enzymes are bromelain, protease 4.5, protease 3.0, lipase AN, peptidase, pectinase, amylase, cellulase and glucoamylase; the enzyme blend comprises about 3.5% lysing enzymes; or about 96.5% microbial enzymes. Finally applicant claims a supplement comprising about 85 – 90% chlorella; 0.2 – 0.85% lysing enzyme blend comprising hemicellulase, beta-gluconase and phytase; and about 9.5 – 14.7% microbial enzyme blend comprising bromelain, protease 4.5, protease 3.0, lipase AN, peptidase, pectinase, amylase, cellulase and glucoamylase; specifically about 88% chlorella; 0.4% lysing enzyme blend; 11.6% microbial enzyme blend; wherein the composition is a capsule or tablet.

Kobayashi teaches foodstuff, nutritional compositions comprising chlorella and an enzyme blend of cellulose, beta gluconase, protease, hemicellulase, and amylase (lysing and microbial enzymes) (claims). Kobayashi teaches that the enzymes are effective to digest the walls of the chlorella and improve digestibility of the chlorella in food stuffs (col.1 line 15-30).

Kobayashi does not teach all of the claimed enzymes in the composition. However, each of the instant enzymes were well known and used in the art to improve digestibility of foodstuffs

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and/or probiotic supplements. In support Sabin teaches phytase as a digestive aid (col.6 line 3-20), Rohde teaches cellulose, pectinase and hemicellulase as effective digestive enzymes (abstract, col.2 line 15-40), and Perkes teaches proteases and bromelain as effective digestive enzymes (0045-0059).

Kobayashi does not teach the compositions comprising the claimed amounts of enzymes and chlorella. However, Kobayashi identifies the lysing and microbial enzymes as effective to lyse the cell walls of the chlorella, and are thus recognized result effect variables. At the time of the claimed invention, one of ordinary skill in the art would have been motivated by Kobayashi to optimize the amounts of enzymes, as a matter of routine experimentation. Moreover, at the time of the claimed invention, one of ordinary skill in the art would have been motivated to optimize the amounts of enzymes with a reasonable expectation for successfully obtaining the effective nutritional composition of Kobayashi.

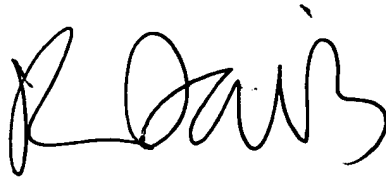
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth A. Davis whose telephone number is 571-272-0915. The examiner can normally be reached on M-F 7:00 - 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ruth A Davis  
February 21, 2006  
AU 1651

A handwritten signature in black ink, appearing to read "R Davis", with a stylized flourish at the end.